Comments to the HIT Standards Committee
Implementation Workgroup—Implementation Experiences Panel
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Organizational Overview

Truman Medical Centers (TMC) is a not-for-profit, acute-care hospital system that serves as Western Missouri's safety net health system. TMC is the primary teaching hospital for the University of Missouri- Kansas City Schools of Medicine, Nursing, Dentistry, and Pharmacy. TMC has two hospitals with a total of 380 beds, one in downtown Kansas City, and one that serves a fast growing community in eastern Jackson County, Missouri. In addition, the TMC system includes TMC Behavioral Health, the Jackson County Health Department, a 212-bed long-term care facility and a number of primary care practices and specialty clinics. Each year, TMC admits more than 19,000 patients and handles about 285,000 physical health outpatient visits, 235,000 behavioral health visits and 160,000 public health encounters. TMC operates the Kansas City region's premier Level One Trauma Center and is the community's health care hub during public health emergencies and natural disasters.

TMC is the key health care provider for those in our community who suffer chronic diseases and health-related issues because of health care disparities. TMC coordinates patient care via its primary care community clinics, behavioral health clinics and administration of public health services. This includes chronic care management services and other care models that hold the promise of improving patient outcomes and reducing health disparities.

In addition to the large volume of primary care provided, TMC serves as Western Missouri's only safety net hospital system and is the "safety net to the community's safety net" of Federally Qualified Health Centers and other non-profit clinics. TMC is a medical home for tens of thousands in the Kansas City area, including many in the middle class who have been afflicted by the current economy. Three out of four of our patients are either Medicaid-eligible or are uninsured. The organization has seen its uncompensated care burden increase significantly in recent years, providing more than $92 million at cost in uncompensated care in the most recent fiscal year.

The complexity of the system, combined with the vulnerability of our patient population, provides a perfect model that will benefit from the implementation of an electronic health record in many ways, such as improved quality of care; reduction of costs; and superior patient safety. The cost of the purchase, implementation and services to support an electronic health record is particularly challenging for safety net hospitals like TMC. The ability to qualify for ARRA stimulus dollars by achieving meaningful use is essential to enable the organization to offset this significant expense.

History of the EMR at TMC

Since 1990, TMC has utilized automation from Cerner, our Kansas City Community member and local partner, beginning, as many have, in the laboratory area. During the 1990's, TMC expanded areas of automation into other ancillary areas and was using a clinical data repository by the turn of the century. TMC has continued to expand utilization into patient care areas, including providing the ability for nurses and physicians to document care and manage medication orders.

TMC leadership's far-sighted goal has ultimately been to enhance the ability of all patients to participate in their healthcare, and for providers to have real-time access to medical information and tools to help ensure the quality and safety of the care provided, while simultaneously facilitating improved access to care and elimination of health care disparities. Despite this long term vision, this goal has been difficult to achieve because, like other core safety net hospital systems across the country, TMC's uncompensated care skyrocketed in the last decade. The increasing uncompensated care burden has hindered TMC's ability to generate the capital necessary to fully implement its EHR. Because of this, TMC's implementation has been fragmented, based mostly on functional improvements and department requests, making it more challenging to gain adoption across the system.

In January of 2009, Truman's CEO challenged both the TMC Information Technology and clinical leadership team, along with the executive leaders of Cerner, to fully implement a complete EHR including CPOE, ePrescribing, and a closed loop medications process. The key driver behind this direction was the strong belief that this was the right thing to do for our patients — a message that continues to filter through our organization from the top. The capacity to manage the chronic and acute conditions of our vulnerable patient population requires the ability to view data in a consolidated way that is meaningful to providers. Effective implementation of an EHR and sharing of patient data across the continuum of care will greatly benefit our diverse and complex patient population.

As a result, TMC and Cerner developed an aggressive eighteen-month implementation plan that commenced in June 2009 to move the organization forward while also ensuring the necessary sequencing to support patient safety and provider adoption.

What are the two or three areas related to meeting meaningful use and the quality reporting requirements that you anticipate you will focus on to ensure your organization's readiness? Describe your approach, use of technology, and solution to meeting MU/quality reporting.

1) Adoption and Sustainability

Stage 1 requirements are well beyond our current use of the electronic record and will require physicians and nurses to transition to doing more of their work assisted by an EHR. It is essential that appropriate adoption occur now and that

we develop mechanisms to sustain it as we look to more significant process changes in the later Stages and the need to demonstrate that the new processes deliver better outcomes to our patients. In addition, the timeline for achieving meaningful use is much more compressed than traditional implementation schedules. We have worked closely with our vendor partner to apply best practice to the implementation sequencing so we ensure the safety of our patients as well as sustainable provider adoption that meets our mutually agreed upon metrics and goals for the program.

Strong Clinical and Operational leadership— We have had strong clinical and operational input and leadership since the initial planning with Cerner. Clinicians have been at the table for all planning and design efforts, and their leadership is committed to breaking down barriers where they existed before.

TMC began by gathering a multi-disciplinary team to create a set of guiding principles and internal "rules of the road" for how we would approach the planning and execution of our implementation. We reviewed these across the organization, incorporating feedback and gained final approval from our IT governance group, comprised of both clinical and operational leaders from across the organization. The executive sponsors for the project are the COOs of both hospitals, the CNO, CMO and the Medical Director of Quality. These clinical and operational executives are leading and driving key decisions and are accountable for the overall success of the project, along with the CIO. Broad participation from the front-line users in planning and in making key operational decisions has been essential in achieving buy-in and in building processes that will aid them in their daily work with patients.

There has also been a consistent and clear message from our CEO and our Board, through both words and action, that this is the right thing to do. They have consistently promoted this as important to TMC's future in our collective goal of providing the highest quality of care to our patients while enhancing patient safety, and in ensuring that our patients and their referring providers have accurate, up-to-date information for transition of care outside of TMC.

Training— Training was identified as a significant concern early in the planning process by organizational constituents from the end-user to our Board members. It is widely believed that the limited success of the previous initiatives to ensure adoption had been the result of TMC's many challenges in adequately training clinicians in both functionality and workflow. TMC has made substantial investments to ensure that clinicians receive the training they need to adequately perform in the new electronic world and to accept the change required of them. Our investment has been in additional training staff -- including a curriculum designer who has developed web-based training tools -- in permanent training facilities, and in tools and resources from our vendor partner which have helped identify training needs, gaps and best-practice approaches. Although we are attempting to maximize the value of the training we offer and minimize clinicians' time away from patient care, there is an

enormous cost to TMC in revenue, overtime and reallocation of resources necessary to assure successful training for our doctors and our nurses.

For the most part, TMC's physicians have accepted these dramatic changes to their workflow, as they recognize the importance of these efforts in support of the care they give to their patients. We are working hard to insure we are providing value to them that makes the investment of their time in training and process change worthwhile. We have actively engaged our physicians in making decisions about these changes.

Access to computers in clinical work areas— As we engaged our clinicians in the planning process, they expressed concern over the lack of computing devices to support ready access and the ability to input data at the point of care. Although PCs and COWs (computers on wheels) were available on every unit, we did not have sufficient quantities of them in key work areas to use during high volume times. We placed 500 additional computing devices in the clinics and inpatient units to support this end user requirement. Working with physician and nurse managers, we have identified locations within the facilities that will serve the greatest number of clinicians to be able to input and retrieve data.

Engagement of Quality Management Department— TMC's Quality Management (QM) Department has actively engaged with the project in developing decision support tools to improve patient safety and quality. They have worked over the last couple of years to create standardized order sets that were used on paper and are being integrated into the electronic system. TMC's QM Department developed a process to both create and gain approval for the order sets. This process includes input from physicians throughout the process to ensure alignment and buy-in for their use from the medical staff and their leadership.

Regular/ Formal Communication— Transparency in the process is extremely important to ensure input and buy-in from clinicians and to guarantee that all feedback is heard and addressed. The project Web site is updated weekly and organizational stakeholders are directed to the updates through email each week. Project leaders and clinicians regularly attend medical department meetings with physicians, all management staff meetings, nursing leadership meetings, and staff meetings across the organization. Our PR and Marketing department provides creative signage for each major project milestone and for special training sessions, lunch-and-learns, and information booths located at each facility.

2) *Reporting of MU functional and quality measures*

Current reporting of core measures and other required reporting is already cumbersome and resource-intensive. We are concerned about CMS' new increased reporting requirements for both the quality and functional measures for meaningful use and the resulting burden it could place on the organization.

Ensuring that the right data is captured and coded for analysis and exchange -- and therefore accessible throughout the organization so it is clinically useful -- will be necessary to support reporting requirements from the EHR. It is also critical to the performance-focused mindset led by our quality department that is pervasive throughout the organization.

When we began planning with Cerner early last year, we looked for ways to demonstrate a real ROI while ensuring we were capturing the right data discreetly through our documentation, aided by evidence-based decision support tools to drive the actions of clinicians. In addition, we focused on the frequency of reporting that would allow us to make adjustments to care plans as needed to ensure the best outcomes for our patients. We also wanted these tools embedded into clinician workflow in a logical way that facilitated efficiency, while directing them to respond to the patient's condition as supported by the medical evidence. We have worked closely with Cerner to hone the reports from these tools to make them efficient and effective at TMC and to enable continuous education by our clinical leadership for the student population as well as experienced staff.

CMS estimates the average time to report all of the measures (both functional and quality) is eight hours. We believe this is vastly underestimated when one considers the current combined electronic and manual processes. Although we are relying on our vendor to embed reports into the system that show our progression (to enable us to address gaps on a real time basis), it will take some time to gain trust in the final data output without the usual level of rigor by our Quality Department to validate it prior to submission.

Describe your roadmap for moving from where you are today to demonstrating the Level 1 "meaningful use" criteria and achieving the CMS incentives.

The Stage 1 requirements provide guidance concerning how certain aspects of the inpatient EHR should be implemented. Although we were engaged in planning with Cerner prior to the initial release of the requirements, they have informed our direction and details of our plan.

We have completed the software upgrade to put us on the version that Cerner will certify for meaningful use. In addition, we have embedded evidence-based decision support tools into nursing workflow; begun the first phase of the roll out of CPOE, ePrescribing and documentation in our ambulatory clinics; and have begun imaging our paper documents to enable clinicians to readily review and sign them without having to locate a paper chart. We will continue to implement workflow tools supported by clinical evidence into both nurse and physician workflow and in late summer of this year will go live in all acute care areas with CPOE, documentation and a closed-loop medication management process supported by point-of-care medication administration devices.

Although our physicians will not qualify for incentive payments in the ambulatory areas as they are currently considered "hospital-based" (POS 21/22 used for billing), we are automating all ambulatory care clinics as part of this process to support a continuous record across the TMC system. TMC hopes that provider eligibility will be readdressed in Stage 1 or in future Stages.

About 60 percent of our patients enter the system through our ED and sometimes must wait there for an inpatient bed to become available. It is therefore important to initiate the electronic record in the ED for these patients. In addition, documentation of data needed for core measures often starts in the ED. And, although implementing CPOE in the ED is not required for Stage 1, we know this will help to ensure that orders are not missed and duplicate orders are not entered as the patients transition to the next level of care either in the hospital or out into the community. We are hopeful that the Stage 1 requirements will be changed to include ED orders as part of the CPOE measure.

In executing this roadmap, what do you feel is your greatest challenge and why?

Although we recognize that we have some time to qualify for Stage 1 incentives for our Medicare patients, it is important for TMC to meet the requirements to have access to Year One funds. Ensuring initial adoption and ongoing sustainability of adoption by providing continuous value to our clinicians is challenging, particularly with the speed of change we are asking from the physicians. Working with Cerner, we completed a detailed satisfaction survey with good participation from all clinical participants from medical students to ancillary providers. We will continue to monitor adoption through reports embedded in our system that demonstrate utilization. We will plan for ongoing re-learning, using observation while working with clinical leaders to understand challenges and to gain direction from end-users on how to continually add value to the tools.

Outline your approach, use of technology, and implementation plan for meeting the requirements for:

1) Personal health records

Our initial goal is to focus on the effective implementation of the EHR for clinician use and to get patient data captured electronically to take advantage of the opportunities for reporting to better support our patients in their journey to healthier outcomes. We have begun to investigate approaches to personal health records and patient portals to improve our patients' access to their information and the system in general. As it is unlikely that our physicians in ambulatory practice will qualify for MU incentives (they currently fall under the hospital-based definition), we are defining this as a second phase initiative slated for completion to support Stage 2 MU requirements for hospitals. We again strongly urge CMS to change its rule to address the hospital-based physician eligibility issue.

2) HIE content standards

For these standards, we are relying on Cerner, who has committed to ensure that the modules we have deployed will meet the appropriate standards as proposed. We believe future certification requirements will ensure that vendor products in the marketplace have the necessary capabilities using the prescribed standards. We have recently implemented the version of Cerner's software that they will support for their clients to meet MU requirements. In addition, the Cerner Millennium solutions went through CCHIT preliminary-ARRA certification testing on January 15, 2010. These solutions passed 21 of 24 hospital components and incremental testing will be completed in late spring/ early summer as the final rule is completed.

3) HIE transport standards

TMC has been actively participating in the formation of both the statewide and regional health information organizations (HIO), and I am co-chairing one of the HIE workgroups for the State of Missouri. We are continuing to monitor the landscape in the state, as most HIOs are still in the planning phase or in the very early stages of implementation. Once we identify the direction we will take, we will ensure that recommended transport standards are supported by the health information exchange entity.

Locally, we are working with Cerner to use their "Healthe Hub" technology in sharing complete records with our community's Federally Qualified Health Centers to provide timely access to complete patient information for our shared patient populations. TMC is the "safety net" to these FQHCs and receives most of their adult specialty referrals.

4) Quality reporting

Although we believe that the capture of the data to facilitate reporting of the quality measures will be challenging, we are working closely with our vendor to help us accomplish this. Much of the data needed for core/ quality measures will be provided in a coded format, with physician-maintained or verified problem and allergy lists and medication reconciliation, as we complete the execution of our plan. The tools we have implemented from our vendor will help to support our ability to get the data we need for reporting on the required quality measures in a codified format. The challenge is to get the other data that could be contained in more free-text physician documentation like the history and physical.

Safety net hospitals like TMC are very concerned that pay-for-performance methodologies will not accurately reflect services provided for patients in need of care because of social and/or economic health disparities, including mental illness. We are therefore also focused on getting data captured in our system that is needed to improve healthcare outcomes for our patient population. Examples would include health literacy, socio-economic status and

transportation limitations. Additionally, in anticipation of payments based on outcomes, we are working to identify measures that would potentially be "disparity sensitive" and may penalize safety net providers based on factors beyond their control.

Our Quality Management Department and Medical Director of Quality have actively engaged with us as we created our plan and as we have implemented decision support tools embedded in clinician workflow to continue to advance patient safety and quality. Part of meaningful use for TMC is to have an infrastructure in place that facilitates the capture of data that can help to drive performance improvement. The real-time reporting and operational dashboards available to our bedside nurses and their leadership help to ensure they have information available to react and respond in a way that supports our quality and patient safety initiatives. In addition, we have implemented standardized order sets that will support the quality measures and reporting targeted at meeting the meaningful use requirements.

We also think it is important to comment on the CMS proposed rule.

- CMS' proposed implementation of the EHR incentive programs via the phased-in, three-stage meaningful use definition requires hospitals to plan, purchase, install, implement, and use EHR systems to meet three different meaningful use requirements without knowing the full scope of the requirements at the onset of the program. **CMS should adopt one meaningful use criteria that can be phased in over the life of the incentive programs, specify the full scope of requirements at the onset of the program, and allow hospitals more transition time (than what is in the proposed rule) to achieve the meaningful use criteria.** This is especially important for safety net hospitals like Truman Medical Centers.

- In addition, CMS' proposed meaningful use adoption schedule creates additional burden for hospitals that become meaningful EHR users later. These hospitals typically do not have the capital resources to make the needed investments and should be **helped** by the EHR incentive program, not penalized.

- The phased-in, three-stage meaningful use definition also makes administering the Medicaid incentive program unnecessarily complicated. **CMS should establish one meaningful use definition for hospitals seeking incentives from both the Medicare and Medicaid programs while retaining the flexibilities Congress intended for the states**—i.e., states' ability to make Medicaid incentive payments over a three- to six-year period, payment years need not be consecutive, etc.